

# ADVANCING THE PROGRESS OF BASIC PLANT BIOLOGY

CENTER FOR PLANT BIOLOGY  
PURDUE UNIVERSITY

*2023-2027 STRATEGIC PLAN*



# CORE VALUES

**The CPB's core values guide everything we do.** They are central to how we conduct ourselves, identify priorities, make decisions, take on challenges, balance interests, perform research, and how we recruit, train, and promote our faculty and trainees. Ultimately, our activities are aligned to help fulfill Purdue's mission, advance basic plant biology, and develop the next generation of plant biologists.

The CPB exists to **foster a community** for basic plant biology at Purdue. As members of the CPB, we are **leaders in basic plant biology** with an uncompromised commitment to **upholding the highest standards** in research, mentoring, and training. We strive to **create an affirming culture and sense of belonging for all CPB members**.

- ▶ **Fostering community.** The CPB is the institutional home dedicated to basic plant biology at Purdue. The center serves as a bridge between departments and colleges to bring together faculty, staff, and trainees from nearly 40 research groups across Purdue. We are united by our efforts to advance fundamental understanding of plant biology spanning scales from molecules to ecosystems. Our community is built on respect, collegiality, collaboration, service, and consensus-based decision-making.
- ▶ **Leaders in basic plant biology.** The strength of the CPB comes from the scientific expertise of its members. We are leaders at all levels in our fields, generating knowledge that expands the frontiers of plant biology. Our discoveries ultimately drive innovation, but our research is motivated by exploring the most scientifically pressing questions. We believe that fundamental research without constraint can transform society unimaginably and pay out-of-proportion returns on its investment. As leaders, we must nurture independence, creativity, and confidence while training the next generation of plant biologists.
- ▶ **Upholding the highest standards.** We are dedicated to honesty, integrity, and ethical behavior in all we do. We pride ourselves on using rigorous peer review to publish trustworthy research and to justify funding for our ideas. We believe that the CPB should support its members by providing value to research, graduate education, training, and professional growth beyond what we get from our home departments. We pledge to hold ourselves accountable to our core values and the high expectations of a premier center within a world-class university like Purdue.
- ▶ **Creating an affirming culture and sense of belonging.** The CPB should provide a space where its members feel safe and can find themselves represented. We want all members to feel like they belong and that they are an integral part of the CPB because they are. We proactively seek to affirm the cultural identities of our fellow CPB members and to recognize the value they bring as individuals to the center. We shall always be mindful of our actions and how they may affect the experiences and successes of others. We celebrate and model best practices of diversity, equity, inclusion, and accessibility.

***Our core values are central to all aspects of this strategic plan.***

## ***To promote the advancement of basic plant biology and the success of its future leaders***

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The CPB represents the basic science branch of Purdue University's Institute for Plant Sciences. Basic science is central to the contemporary land-grant mission because it provides the foundation for all research and major technological breakthroughs. For Purdue to advance its global leadership in discovery and innovation, there must be strong support for basic research. Therefore, our mission is to promote the progress of fundamental plant biology and the success of future leaders in the field. Our research focuses on providing a clearer understanding of the processes underlying plant biology, irrespective of future application. At the same time, our discoveries lay the groundwork for Purdue to be a global leader in all aspects of plant sciences research.

### ***Key characteristics of our mission***

- ▶ **Promote the progress of basic plant biology** by investing in people, ideas, and research; by communicating the consensus and needs of faculty and trainees working in basic plant biology at Purdue; by facilitating interactions across campus to advance basic plant biology research at Purdue; and by communicating our science with multiple audiences to demonstrate the value of basic research and the impact of our work.
- ▶ **Promote the success of future leaders** by providing world-class research-focused training and mentoring for graduate students and postdoctoral researchers; through interdisciplinary and innovative approaches to graduate education that foster intellectual inquiry and creative mastery; and by offering access to professional networks and professional development opportunities.



## *To lead the world in basic plant biology research and training*

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With advancements in genetic, biochemical, imaging, computational, and “omics” approaches, there has never been a more exciting time for basic plant biology. Basic plant biology has also never been more important than it is right now with the grand challenges facing the 21<sup>st</sup> century. Purdue is positioned to be atop the list of global leaders driving discovery in plant biology. To become the #1 institution in the world for basic plant biology research and training, the CPB must raise the visibility of the center and its researchers, recruit and retain the best scientists, support the needs of basic researchers and increase the rate of discovery, and offer premier research training and graduate education.

### ***Key characteristics of our vision***



► **Raise the visibility of CPB and its researchers** by increasing the amount of federally funded research; by publishing more high-impact papers; and by championing the accomplishments of CPB members through social media, the press, and nominations for high-profile awards.

► **Recruit and retain the best scientists** through engagement and outreach to build relationships that expand CPB’s professional network; through initiatives to reach diverse audiences in our recruiting efforts; by promoting a culture that supports professional success, mental health, well-being, and cultural acclimation of CPB members; and by investing in people and their professional development.

► **Support the needs of basic researchers and increase the rate of discovery** by bringing people together to share ideas; by promoting cooperation and collaboration to create positive feedback loops; by improving and supporting access to facilities and research infrastructure; and by advocating for the need for basic science.

► **Offer premier research training and graduate education** by complementing curriculum with experiential learning; by training faculty in effective mentoring and teaching; by helping postdoctoral researchers develop into independent thinkers and scientists; and by developing skillsets that translate to a wide range of career options for CPB trainees.

# STRATEGIC GOALS AND SPECIFIC INITIATIVES

**Over the next five years**, we will work toward CPB's mission and vision through specific initiatives centered around **four strategic goals**:

► **Increase the visibility of basic plant biology at Purdue**

- Hold research retreats with peer centers located in the Midwest
- Design and implement communications strategies to convey the importance of basic plant research at Purdue and to the general public
- Develop visitation programs to recruit students attending predominantly undergraduate and/or minority-serving institutions
- Invite top journal editors and federal agency program managers to visit Purdue
- Submit "Purdue Reputational Stewardship" proposals to hold high-profile symposia

► **Empower faculty, trainees, and staff and support their success**

- Provide travel support to attend conferences
- Recognize CPB members for exemplary performance in research, teaching, and service
- Facilitate fellowship proposal writing groups for trainees
- Create internal peer review networks to provide feedback on manuscript and grant proposals before submission
- Develop peer mentoring programs and networks for trainees and staff
- Offer intercultural mentorship training and strategies for faculty

► **Facilitate collaboration among CPB members**

- Support the development of small-team collaborative grant proposals
- Hold annual CPB research retreats and symposia
- Co-sponsor seminar speakers in departmental seminar series
- Invest in shared research equipment
- Subsidize publication costs for collaborative papers

► **Enhance basic plant biology research and training**

- Hold annual faculty seed grant competitions
- Submit large center grants around strategic research themes like climate change
- Subsidize the cost of using Purdue's core facilities
- Advocate for new strategic hires
- Develop an independent graduate training program





# CONCLUDING REMARKS + FUTURE DIRECTIONS

The CPB's 2023-2027 strategic plan is aligned with [Purdue's Next Moves](#) and will contribute to advancing the missions of Purdue's [College of Agriculture](#) and [College of Science](#), and the US [National Science Foundation](#). Moreover, CPB's mission and vision are consistent with the idea that embracing and investing in fundamental research leads to [more robust applied research and higher-quality outcomes](#). For Purdue to become a global leader in plant sciences research that positively impacts agriculture in Indiana and around the world, and for Purdue to be known for growing graduates, entrepreneurs, and the ag-biotech industry, there must be ***continued support for basic plant biology at Purdue***. The CPB's roles in advancing the progress of basic plant biology are by:

- ▶ **Communicating the need for and benefits of basic plant biology**
- ▶ **Nurturing and empowering CPB members**
- ▶ **Championing the accomplishments of basic plant biologists and the impacts of their work**
- ▶ **Fostering community, collaboration, and cooperation for basic plant research at Purdue**
- ▶ **Increasing the rate of discovery through support for unique needs of basic plant biologists**
- ▶ **Improving access to equipment and research infrastructure**
- ▶ **Enhancing training and preparation of future leaders in basic plant biology**

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## Learn more



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